

Y Ron Shen

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106
papers

8,949
citations

38
h-index

94
g-index

114
ext. papers

9,636
ext. citations

6.7
avg, IF

6.47
L-index

#	Paper	IF	Citations
106	Surface properties probed by second-harmonic and sum-frequency generation. <i>Nature</i> , 1989 , 337, 519-525	35.4	1924
105	Mapping molecular orientation and conformation at interfaces by surface nonlinear optics. <i>Physical Review B</i> , 1999 , 59, 12632-12640	3.3	694
104	Optical Second Harmonic Generation at Interfaces. <i>Annual Review of Physical Chemistry</i> , 1989 , 40, 327-350	5.7	636
103	Liquid Interfaces: A Study by Sum-Frequency Vibrational Spectroscopy. <i>Journal of Physical Chemistry B</i> , 1999 , 103, 3292-3307	3.4	527
102	General considerations on optical second-harmonic generation from surfaces and interfaces. <i>Physical Review B</i> , 1986 , 33, 8254-8263	3.3	374
101	New information on water interfacial structure revealed by phase-sensitive surface spectroscopy. <i>Physical Review Letters</i> , 2005 , 94, 046102	7.4	337
100	Linear and nonlinear wave propagation in negative refraction metamaterials. <i>Physical Review B</i> , 2004 , 69,	3.3	259
99	Structure and charging of hydrophobic material/water interfaces studied by phase-sensitive sum-frequency vibrational spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 15148-53	11.5	239
98	Surface vibrational spectroscopic study of surface melting of ice. <i>Physical Review Letters</i> , 2001 , 86, 1554-7	7.4	234
97	Valley and band structure engineering of folded MoS(2) bilayers. <i>Nature Nanotechnology</i> , 2014 , 9, 825-9	28.7	219
96	Bulk contribution in surface second-harmonic generation. <i>Physical Review B</i> , 1988 , 38, 7985-7989	3.3	218
95	Phase-sensitive sum-frequency spectroscopy. <i>Annual Review of Physical Chemistry</i> , 2013 , 64, 129-50	15.7	193
94	Unveiling Microscopic Structures of Charged Water Interfaces by Surface-Specific Vibrational Spectroscopy. <i>Physical Review Letters</i> , 2016 , 116, 016101	7.4	181
93	Generation of Far-Infrared Radiation by Picosecond Light Pulses in LiNbO3. <i>Applied Physics Letters</i> , 1971 , 19, 320-323	3.4	174
92	Basic Theory of Surface Sum-Frequency Generation. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 15505-15509	5.9	150
91	Local and nonlocal surface nonlinearities for surface optical second-harmonic generation. <i>Physical Review B</i> , 1987 , 35, 4420-4426	3.3	132
90	Gate-tunable third-order nonlinear optical response of massless Dirac fermions in graphene. <i>Nature Photonics</i> , 2018 , 12, 430-436	33.9	129

89	Evaluation of Surface vs Bulk Contributions in Sum-Frequency Vibrational Spectroscopy Using Reflection and Transmission Geometries. <i>Journal of Physical Chemistry B</i> , 2000 , 104, 3349-3354	3.4	123
88	Environment-Induced Surface Structural Changes of a Polymer: An in Situ IR + Visible Sum-Frequency Spectroscopic Study. <i>Journal of Physical Chemistry B</i> , 1997 , 101, 9060-9064	3.4	102
87	Surface Propensities of Atmospherically Relevant Ions in Salt Solutions Revealed by Phase-Sensitive Sum Frequency Vibrational Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2011 , 2, 1946-1949	6.4	101
86	Refractive Indices and Optical Anisotropy of Homologous Liquid Crystals. <i>Molecular Crystals and Liquid Crystals</i> , 1976 , 36, 193-207		100
85	Non-linear optical spectroscopy as a novel probe for molecular chirality. <i>International Reviews in Physical Chemistry</i> , 2005 , 24, 257-299	7	95
84	Fundamentals of Sum-Frequency Spectroscopy 2016 ,		88
83	A few selected applications of surface nonlinear optical spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1996 , 93, 12104-11	11.5	79
82	Nonlinear optical spectroscopy of photonic metamaterials. <i>Physical Review B</i> , 2008 , 78,	3.3	74
81	Structural definition of the BIL and DL: a new universal methodology to rationalize non-linear SFG signals at charged interfaces, including contributions. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 5190-5199	3.6	72
80	Bulk contribution from isotropic media in surface sum-frequency generation. <i>Physical Review B</i> , 2002 , 66,	3.3	66
79	Optical parametric amplification in a lithium triborate crystal tunable from 0.65 to 2.5 μ m. <i>Applied Physics Letters</i> , 1991 , 59, 2805-2807	3.4	59
78	Phase reference in phase-sensitive sum-frequency vibrational spectroscopy. <i>Journal of Chemical Physics</i> , 2016 , 144, 244711	3.9	56
77	Probing the charge-transfer state of CO on Pt(111) by two-dimensional infrared-visible sum frequency generation spectroscopy. <i>Physical Review B</i> , 2004 , 69,	3.3	52
76	Phase-matched far-infrared generation by optical mixing of dye laser beams. <i>Applied Physics Letters</i> , 1973 , 23, 669-671	3.4	52
75	Surface Studies of Polymer Blends by Sum Frequency Vibrational Spectroscopy, Atomic Force Microscopy, and Contact Angle Goniometry. <i>Journal of Physical Chemistry B</i> , 1998 , 102, 6225-6230	3.4	51
74	Effect of pH on the Water/Al ₂ O ₃ (11 02) Interface Structure Studied by Sum-Frequency Vibrational Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 13887-13893	3.8	47
73	Second-harmonic generation from C60 thin films at 1.064 microm. <i>Physical Review B</i> , 1995 , 51, 10057-10067	3.6	44
72	Invited Lecture. Studies of liquid crystal monolayers and films by optical second harmonic generation. <i>Liquid Crystals</i> , 1989 , 5, 635-643	2.3	44

71	Vibrational and electronic spectroscopy of pyridine and benzene adsorbed on the Rh(111) crystal surface. <i>Journal of Chemical Physics</i> , 1988 , 88, 441-450	3.9	42
70	Mechanism of Electric Power Generation from Ionic Droplet Motion on Polymer Supported Graphene. <i>Journal of the American Chemical Society</i> , 2018 , 140, 13746-13752	16.4	42
69	Exploring new opportunities with sum-frequency nonlinear optical spectroscopy. <i>Pure and Applied Chemistry</i> , 2001 , 73, 1589-1598	2.1	40
68	OPTICAL PHYSICS: Enhanced: Solitons Made Simple. <i>Science</i> , 1997 , 276, 1520-1520	33.3	38
67	Measurement of Refractive Indices and Study of Isotropic-Nematic Phase Transition by the Surface Plasmon Technique. <i>Molecular Crystals and Liquid Crystals</i> , 1980 , 59, 97-108		37
66	Competitive Molecular Adsorption at Liquid/Solid Interfaces: A Study by Sum-Frequency Vibrational Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 2069-2076	3.8	36
65	Wavelength Modulation Spectra and Electronic Band Structure of SnS ₂ and SnSe ₂ . <i>Physica Status Solidi (B): Basic Research</i> , 1976 , 75, 303-314	1.3	36
64	Raman Scattering from Nematic Liquid-Crystalline Azoxybenzenes. <i>Journal of Chemical Physics</i> , 1972 , 56, 2654-2664	3.9	36
63	Surface vibrational modes of alpha-quartz(0001) probed by sum-frequency spectroscopy. <i>Physical Review Letters</i> , 2008 , 101, 016101	7.4	35
62	Study of monolayer polymerization using nonlinear optics. <i>Journal of Chemical Physics</i> , 1986 , 85, 7374-7376	3.7	35
61	Polymer Adsorption on Graphite and CVD Graphene Surfaces Studied by Surface-Specific Vibrational Spectroscopy. <i>Nano Letters</i> , 2015 , 15, 6501-5	11.5	33
60	Graphene-doped polymer nanofibers for low-threshold nonlinear optical waveguiding. <i>Light: Science and Applications</i> , 2015 , 4, e348-e348	16.7	33
59	Picosecond, narrow-band, widely tunable optical parametric oscillator using a temperature-tuned lithium borate crystal. <i>Applied Physics Letters</i> , 1993 , 62, 1457-1459	3.4	29
58	Surface pH and Ion Affinity at the Alcohol-Monolayer/Water Interface Studied by Sum-Frequency Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 15224-15229	3.8	29
57	Surface sum-frequency vibrational spectroscopy of nonpolar media. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 5883-7	11.5	27
56	Domain pattern excited by surface acoustic waves in a nematic film. <i>Applied Physics Letters</i> , 1976 , 28, 473-475	3.4	26
55	Structure of the submonolayer of ethanol adsorption on a vapor/fused silica interface studied with sum frequency vibrational spectroscopy. <i>Journal of Physical Chemistry A</i> , 2015 , 119, 4573-80	2.8	25
54	Sum-Frequency Vibrational Spectroscopic Study of Surface Glass Transition of Poly(vinyl alcohol). <i>Macromolecules</i> , 2003 , 36, 3303-3306	5.5	25

53	Phase-sensitive sum frequency vibrational spectroscopic study of air/water interfaces: HO, DO, and diluted isotopic mixtures. <i>Journal of Chemical Physics</i> , 2019 , 150, 144701	3.9	24
52	Applications of Molecular Theory of Sum-Frequency Generations To Study Molecular Chirality <i>Journal of Physical Chemistry A</i> , 2004 , 108, 8058-8076	2.8	23
51	Absorption, Photoluminescence, and Resonant Raman Scattering in BiI ₃ . <i>Physica Status Solidi (B): Basic Research</i> , 1974 , 61, 419-427	1.3	23
50	What the Diffuse Layer (DL) Reveals in Non-Linear SFG Spectroscopy. <i>Minerals (Basel, Switzerland)</i> , 2018 , 8, 305	2.4	22
49	Correlation between Backward Stimulated Raman Pulse and Moving Focus in Liquids. <i>Applied Physics Letters</i> , 1971 , 19, 285-287	3.4	21
48	Surface photon echoes in the infrared range. <i>Applied Physics B, Photophysics and Laser Chemistry</i> , 1990 , 50, 535-539		20
47	Facet-specific interaction between methanol and TiO ₂ probed by sum-frequency vibrational spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E3888-E3894	11.5	17
46	Gate-Controlled Sum-Frequency Vibrational Spectroscopy for Probing Charged Oxide/Water Interfaces. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 5943-5948	6.4	15
45	Surface-Induced Anisotropic Orientations of Interfacial Ethanol Molecules at Air/Sapphire(11 02) and Ethanol/Sapphire(11 02) Interfaces. <i>Journal of Physical Chemistry Letters</i> , 2011 , 2, 1831-1835	6.4	14
44	Sum-frequency phonon spectroscopy on α -quartz. <i>Physical Review B</i> , 2008 , 78,	3.3	14
43	Measurements of dc Kerr Constants for a Homologous Series of Nematic Compounds. <i>Molecular Crystals and Liquid Crystals</i> , 1977 , 43, 287-294		14
42	Local Refractive Index Measurement on a Cholesteric Liquid Crystal Using the Surface Plasmon Technique. <i>Molecular Crystals and Liquid Crystals</i> , 1981 , 67, 261-275		13
41	Scattering of Light by Magnons. <i>Journal of Applied Physics</i> , 1967 , 38, 1490-1495	2.5	13
40	Coherent phonon generation by optical mixing in a one-dimensional superlattice. <i>Journal of Applied Physics</i> , 1973 , 44, 1417-1419	2.5	11
39	Theoretical analysis and simulation of pulsed laser heating at interface. <i>Journal of Applied Physics</i> , 2018 , 123, 025301	2.5	10
38	Response to "Comment on Phase reference in phase-sensitive sum-frequency vibrational spectroscopy" [J. Chem. Phys. 145, 167101 (2016)]. <i>Journal of Chemical Physics</i> , 2016 , 145, 167102	3.9	10
37	Nucleation and dissociation of methane clathrate embryo at the gas-water interface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 23410-23415	11.5	10
36	Response to "Comment on Phase-sensitive sum frequency vibrational spectroscopic study of air/water interfaces: HO, DO, and diluted isotopic mixtures" [J. Chem. Phys. 152, 237101 (2020)]. <i>Journal of Chemical Physics</i> , 2020 , 152, 237102	3.9	10

35	Elastic ice microfibers. <i>Science</i> , 2021 , 373, 187-192	33.3	10
34	Absence of detectable MOKE signals from spin Hall effect in metals. <i>Applied Physics Letters</i> , 2017 , 110, 042401	3.4	9
33	Mapping Dynamical Magnetic Responses of Ultrathin Micron-Size Superconducting Films Using Nitrogen-Vacancy Centers in Diamond. <i>Nano Letters</i> , 2019 , 19, 5697-5702	11.5	9
32	Probing the Mechanisms for Surface-Induced Alignment of Liquid Crystals. <i>Molecular Crystals and Liquid Crystals</i> , 1991 , 207, 77-85		9
31	Theory and Applications of Sum-Frequency Generations. <i>Journal of the Chinese Chemical Society</i> , 2014 , 61, 77-92	1.5	8
30	SUM-FREQUENCY GENERATION AS A SURFACE PROBE. <i>Advanced Series in Physical Chemistry</i> , 1995 , 5-53		8
29	Pretransitional Surface Phenomena in Ferroelectric Liquid Crystals. <i>Molecular Crystals and Liquid Crystals</i> , 1993 , 225, 55-65		7
28	Collective Rotation of the Molecules of a Nematic Liquid Crystal Driven by the Angular Momentum of Light. <i>Molecular Crystals and Liquid Crystals</i> , 1987 , 143, 89-100		7
27	Revisiting the basic theory of sum-frequency generation. <i>Journal of Chemical Physics</i> , 2020 , 153, 180901	3.9	7
26	Ultrasonic waves in sandwiched fluid film. <i>Applied Physics Letters</i> , 1976 , 28, 699-701	3.4	5
25	MEASUREMENTS OF SUBNANOSECOND FILAMENTARY PULSES USING THE CONVOLUTION TECHNIQUE. <i>Applied Physics Letters</i> , 1969 , 14, 380-382	3.4	5
24	Brillouin Scattering in a Cholesteric Liquid Crystal Near the Cholesteric-Isotropic Transition. <i>Molecular Crystals and Liquid Crystals</i> , 1972 , 18, 285-296		5
23	Surface and bulk contributions to the second-harmonic generation in Bi ₂ Se ₃ . <i>Physical Review B</i> , 2016 , 94,	3.3	4
22	Probing Liquid Crystals with Nonlinear Optical Processes. <i>Molecular Crystals and Liquid Crystals</i> , 1987 , 143, 1-6		4
21	The Effect of Conjugation Length and Electron Donor Groups on the Second Order Nonlinear Polarizability of Cyano Substituted Aromatic Molecules. <i>Molecular Crystals and Liquid Crystals Incorporating Nonlinear Optics</i> , 1987 , 150, 607-616		4
20	Sharing of Na ⁺ by Three COO ⁻ Groups at Deprotonated Carboxyl-Terminated Self-Assembled Monolayer-Charged Aqueous Interface. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 9111-9116	3.8	3
19	Surface-Induced Ordering in a Homologous Series of Liquid Crystals Orientational Wetting. <i>Molecular Crystals and Liquid Crystals Incorporating Nonlinear Optics</i> , 1990 , 179, 419-424		3
18	Simultaneous Q-Switching of Two Independent Ruby Lasers. <i>Review of Scientific Instruments</i> , 1970 , 41, 216-218	1.7	3

17	SFG Studies of Oxide/Water Interfaces: Protonation States, Water Polar Orientations, and Comparison with Structure Results from X-Ray Scattering 2013 , 48-84		2
16	Dependence of Liquid Crystal Bulk Alignment on Its Surface Monolayer. <i>Molecular Crystals and Liquid Crystals</i> , 1995 , 262, 35-43		2
15	Nonlinear Optics And Surface Science. <i>Materials Research Society Symposia Proceedings</i> , 1985 , 51, 39		2
14	A note on two-phonon coherent anti-stokes Raman scattering. <i>Journal of Raman Spectroscopy</i> , 1981 , 10, 110-112	2.3	2
13	Correlation of Structure and Mechanical Properties of Polyolefin Surfaces by Ir + Visible Sum Frequency Generation Vibrational Spectroscopy and Atomic Force Microscopy. <i>Materials Research Society Symposia Proceedings</i> , 1998 , 522, 175		1
12	Multiphoton Excitation Studies on GaN with PS Pulses. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 449, 621		1
11	Interface Studies with Nonlinear Optics. <i>MRS Bulletin</i> , 1988 , 13, 28-30	3.2	1
10	Dye-Induced Enhancement of Optical Nonlinearity in Liquid Crystals and Ordinary Liquids. <i>Molecular Crystals and Liquid Crystals</i> , 1998 , 321, 165-175		0
9	Nonlinear Optical Spectroscopic Studies of Polymer Surfaces for Liquid Crystal Alignment: Photo-Irradiated Polyimide and Rubbed Polystyrene Surfaces. <i>Molecular Crystals and Liquid Crystals</i> , 2004 , 412, 339-349	0.5	
8	Vibrational Spectroscopy of Rubbed Polymer Surfaces. <i>Molecular Crystals and Liquid Crystals</i> , 2001 , 358, 103-108		
7	Optical Studies of Pretransitional Surface Ordering and Disorder in Liquid Crystals. <i>Molecular Crystals and Liquid Crystals</i> , 1992 , 223, 85-92		
6	Surface Adsorption Studied by Optical SHG: Soluble Monolayers at the Air/Water Interface. <i>Materials Research Society Symposia Proceedings</i> , 1989 , 177, 363		
5	Progress in Linear Optics, Non-Linear Optics and Surface Alignment of Liquid Crystals. <i>Molecular Crystals and Liquid Crystals Incorporating Nonlinear Optics</i> , 1990 , 179, 365-375		
4	LASER STUDIES OF POLARITONS. <i>Modern Physics Letters B</i> , 1990 , 04, 159-162	1.6	
3	Studies of Multiphoton Dissociation of Polyatomic Molecules with Crossed Laser and Molecular Beams. <i>ACS Symposium Series</i> , 1977 , 72-82	0.4	
2	NONLINEAR OPTICAL SPECTROSCOPY FOR INTERFACES. <i>Advanced Series in Applied Physics</i> , 2010 , 19-25		
1	LASER STUDIES OF POLARITONS 1989 , 158-164		